

## Patent Claims

1. A circuit arrangement as an interface between a  
5 SIM card (1) and a GSM modem (2), which has a  
bidirectional data line (5) which connects a card data  
input/output of the SIM card to a modem data  
input/output of the GSM modem,  
characterized in that  
10 the data line (5) is coupled to at least one edge  
driver (12, 13).
2. The circuit arrangement as claimed in claim 1,  
characterized in that  
15 the data line (5) is coupled to at least one edge  
driver (12, 13), both at the modem end and at the card  
end.
3. The circuit arrangement as claimed in claim 1 or  
20 2,  
characterized in that  
positive (12) and negative (13) edge drivers are  
provided.
- 25 4. The circuit arrangement as claimed in claim 1 or  
2,  
characterized in that  
only positive edge drivers (12) are provided.
- 30 5. The circuit arrangement as claimed in one of the  
preceding claims,  
characterized in that  
the or each edge driver (12, 13) is formed from  
discrete components.  
35
6. The circuit arrangement as claimed in one of the  
preceding claims, in particular as claimed in claim 5,  
characterized in that

the or each edge driver (12, 13) is in each case matched to different signal frequencies, in particular by the capacitance of a coupling capacitor (25, 25') which couples the edge drivers (12, 13) to the data  
5 line (5).

7. The circuit arrangement as claimed in one of the preceding claims, in particular as claimed in claim 5 or 6,  
10 characterized by  
a resistor (30, 30'), which is connected downstream from the coupling capacitor (25, 25'), in order to improve the interference voltage separation.

15 8. The circuit arrangement as claimed in one of the preceding claims, in particular as claimed in one of claims 5 to 7,  
characterized in that  
the response threshold of the or each edge driver (12,  
20 13) can in each case be set or tuned in particular by insertion of a resistor (32, 32') into the circuit.

9. The circuit arrangement as claimed in one of the preceding claims, in particular as claimed in one of  
25 claims 5 to 8,  
characterized by  
a capacitor (33, 33') in order to improve the response to transient interference.

30 10. A method for bidirectional data transmission between a SIM card (1) and a GSM modem (2),  
characterized in that  
the bidirectional data transmission takes place without the use of a control signal for the data direction on a  
35 data line (5) which connects the SIM card (1) and the GSM modem (2).

11. The method as claimed in claim 10,

characterized in that  
one or more edge drivers (12, 13) is or are used for  
conditioning of the signal on the data line.

5 12. The method as claimed in claim 11,  
characterized in that  
the edge driver or drivers (12, 13) can in each case be  
optimized to the clock rate of the data transmission,  
for example by suitable choice of a coupling capacitor  
10 (25, 25').

13. The method as claimed in claim 11 or 12,  
characterized in that  
the interference voltage separation of the edge driver  
15 or drivers (12, 13) which is or are used can in each  
case be set, for example, by means of a resistor (30,  
30').

14. The method as claimed in one of claims 11 to 13,  
20 characterized in that  
the response threshold of the edge driver or drivers  
(12, 13) which is or are used can in each case be set  
or tuned, for example, by means of a resistor (32,  
32').